

Amendments to the claims:

Claims 1-38 (Cancelled)

Claim 39 (New): A method for diagnosing a viral infection in a test animal comprising:

- a) obtaining at least one biological sample from said test animal and from a non-virally infected animal;
- b) contacting said biological sample with a composition comprising one or more viral surrogate marker molecule detection reagents in an amount effective to permit detection and quantitation of a viral surrogate molecule, if present, in said sample; and
- c) detecting said one or more viral surrogate marker molecules, wherein an elevation of levels of said viral surrogate marker molecules, relative to those obtained from non-virally infected animals, is indicative of viral infection in said test animal.

Claim 40 (New): The method of claim 39, wherein a lack of elevation of levels of said viral surrogate marker molecule indicates that the test animal is not virally infected.

Claim 41 (New): The method of claim 39, wherein said viral surrogate marker molecule is obtained from a test subject infected with a virus selected from the group consisting of BVDV, HIV, Ebola virus, FeLv, FIP virus, Bluetongue virus and EPIZOOTIC Hemorrhagic Disease Virus.

Claim 42 (New): The method of claim 39, wherein said virus is BVDV and wherein said viral surrogate marker molecules are BVDV surrogate marker molecules.

Claim 43 (New): The method of claim 42, wherein said one or more BVDV surrogate marker molecules are nucleic acid molecules selected from the group consisting of SEQ ID NO: 3-

46.

Claim 44 (New): The method of claim 43, wherein said nucleic acid molecules are detected by a method selected from the group consisting of in situ hybridization, Southern hybridization, Northern hybridization, and polymerase chain reaction.

Claim 45 (New): The method of claim 43, wherein said nucleic acid molecules are detected by contacting said sample with primers which specifically amplify one or more nucleic acids of SEQ ID NO: 3-46 and performing polymerase chain reaction on said samples.

Claim 46 (New): The method of claim 43, wherein an elevation in one or more nucleic acid molecule of SEQ ID NO: 3-9 is indicative of acute BVDV infection.

Claim 47 (New): The method of claim 43, wherein an elevation in one or more nucleic acid molecule of SEQ ID NO: 10-46 is indicative of persistent BVDV infection.

Claim 48 (New): The method of claim 39, wherein said biological sample is selected from the group consisting of blood, mononuclear cells present in blood, tissue, and urine.

Claim 49 (New): The method of claim 39, wherein said test animal is selected from the group consisting of a bovine, a pregnant bovine, and a bovine calf.

Claim 50 (New): The method of claim 42, wherein said one or more BVDV surrogate marker molecules are proteins or peptide fragments encoded by nucleic acid sequences selected from the group consisting of SEQ ID NO: 3-46 and wherein said detection is performed by contacting said samples with a detectably

labeled antibody immunospecific for said one or more proteins or peptide fragments.

Claim 51 (New): The method of claim 50, wherein said one or more proteins or peptide fragments are encoded by one or more nucleic acid molecules of SEQ ID NO: 3-9.

Claim 52 (New): The method of claim 50, wherein said one or more proteins or peptide fragments are encoded by one or more nucleic acid molecules of SEQ ID NO: 10-46.

Claim 53 (New): The method of claim 42 wherein said test animal is pregnant and wherein said elevation of said one or more BVDV surrogate marker molecules is indicative of BVDV in the fetus of said pregnant test animal.

Claim 54 (New): The method of claim 50 wherein said test animal is pregnant and wherein the elevation of said protein or peptide fragment levels is indicative of BVDV in the fetus of said pregnant test animal.

Claim 55 (New): An isolated ruminant nucleic acid molecule comprising a nucleic acid sequence selected from SEQ ID NO: 7-9 and 22-46, the expression of said nucleic acid being elevated during BVDV infection.

Claim 56 (New): The isolated ruminant nucleic acid molecule of claim 55, wherein the nucleic acid sequence is selected from SEQ ID NO: 7-9, the expression of said nucleic acid being elevated during acute BVDV infection.

Claim 57 (New): The isolated ruminant nucleic acid molecule of claim 55, wherein the nucleic acid sequence is selected from SEQ ID NO: 22-46, the expression of said nucleic acid being elevated during persistent BVDV infection.

Claim 58 (New): The nucleic acid molecule of claim 55, which is selected from the group consisting of DNA, cDNA, and RNA.

Claim 59 (New): An oligonucleotide between about 10 and about 200 nucleotides in length, which specifically hybridizes with a nucleic acid molecule of claim 55.

Claim 60 (New): The oligonucleotide of claim 59, which is between about 15 and about 30 nucleotides in length.

Claim 61 (New): An isolated ruminant protein or peptide fragment encoded by a nucleic acid molecule of claim 55, expression of said encoded protein or peptide fragment being elevated during BVDV infection.

Claim 62 (New): The isolated ruminant protein or peptide fragment of claim 61, wherein the protein or peptide fragment is encoded by a nucleic acid molecule of SEQ ID NO: 7-9, and expression of said protein or peptide fragment is elevated during acute BVDV infection.

Claim 63 (New): The isolated ruminant protein or peptide fragment of claim 61, wherein the protein or peptide fragment is encoded by a nucleic acid molecule of SEQ ID NO: 22-46, and expression of said protein or peptide fragment is elevated during persistent BVDV infection.

Claim 64 (New): An antibody immunologically specific for the isolated protein or peptide fragment of claim 61, wherein said antibody being selected from the group consisting of a polyclonal antibody and a monoclonal antibody.

Claim 65 (New): A nucleic acid comprising the 5' untranslated, promoter region of a nucleic acid molecule of claim 55.

Claim 66 (New): A nucleic acid construct as claimed in claim 65, said 5' untranslated promoter region being operably linked to a sequence encoding a reporter gene.

Claim 67 (New): A method for identifying a Bovine Viral Diarrhea Virus (BVDV) surrogate marker in infected cattle comprising:

- a) obtaining a plurality of samples of mRNA from a first cattle and from a second cattle;
- b) reverse transcribing said mRNA from said first and second cattle to generate cDNA molecules therefrom; and
- c) performing a PCR select subtraction method to identify those cDNA clones which are differentially expressed between said first and second cattle, thereby identifying a BVDV surrogate marker; wherein said first cattle is infected and said second cattle is non-infected, said first cattle is acutely infected and said second cattle is persistently infected, or said first cattle is acutely infected and said second cattle is vaccinated.

Claim 68 (New): The method of claim 67, wherein said first cattle is acutely infected with BVDV, and said second cattle is persistently infected with BVDV thereby identifying a BVDV surrogate marker which distinguishes acutely infected cattle from persistently infected cattle.

Claim 69 (New): The method of claim 67, said first cattle is acutely infected with BVDV, and said second cattle is vaccinated, thereby identifying a BVDV surrogate marker which distinguishes acutely infected cattle from vaccinated cattle.

Claim 70 (New): The method of claim 67, wherein said first cattle is infected and said second cattle is non-infected and wherein said method thereby identifies a BVDV surrogate marker which distinguishes infected cattle from non-infected cattle.

Claim 71 (New): A kit for differentially diagnosing BVDV infection comprising at least one BVDV surrogate marker detector molecule, and optionally instructions for use.

Claim 72 (New): The kit of claim 70, wherein said BVDV surrogate marker detector molecule is selected from the group consisting of a probe or primer which specifically hybridizes with a BVDV surrogate marker nucleic acid, and an antibody which specifically binds to a BVDV surrogate marker polypeptide.